

REMARKS

The Office Action dated June 9, 2006, has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 1-36 are pending in the present application, of which claims 1, 10, 18, 26, and 36 are independent claims. Claims 1-9 and 11-35 have been amended and claim 36 has been added to more particularly point out and distinctly claim the invention. No new matter has been added, and no issues have been raised that would require further search and/or consideration. Claims 1-36 are respectfully submitted for consideration.

The Office Action, at page 2, item 2 states that “Applicant’s arguments ... are moot in view of the new ground(s) of rejection.” Applicant respectfully disagrees. As detailed below, some of Applicant’s arguments are still relevant and remain unanswered.

Claims 1-5, 8, 10-13, 16, 18-21, 23, 26-27, 29, and 32-35 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. 2002/0068570 of Abrol et al. (“Abrol”) in view of U.S. Patent Application Publication No. 2004/0203783 of Wu et al. (“Wu”) and further in view of U.S. Patent Application Publication No. 2002/0191627 of Subbiah et al. (“Subbiah”). The Office Action took the position that Abrol teaches all of the elements of the claims except “sending a request message from the second access router to the mobile node; and in response to the received request message, sending a connectivity report from the mobile node to the second access router and providing the second access router with information about the

first access router through the connectivity report.” The Office Action supplied Wu to remedy the deficiencies of Abrol with regard to “sending a request message from the second access router to the mobile node; and in response to the received request message, sending a connectivity report from the mobile node to the second access router” and cited Subbiah to remedy the deficiencies of Abrol with regard to “providing the second access router with information about the first access router through the connectivity report.” Applicant respectfully submits that the claims recite subject matter that is neither disclosed nor suggested in the cited art.

Claim 1, upon which claims 2-9 and 32 depend, is directed to a method including sending a request message from a second access router to a mobile node. The method also includes, in response to the request message, sending a connectivity report from the mobile node to the second access router. The sending the connectivity report includes providing the second access router with information about a first access router through the connectivity report. The method further includes handing over the mobile node from the first access router to the second access router

Claim 10, upon which claims 22-17 and 33 depend, is directed to a method including moving a mobile node from a first geographic location associated with a first access router to a second geographic location associated with a second access router. The method also includes sending a request message from the second access router to the mobile node. The method further includes sending a connectivity report from the mobile node to the second access router. The sending the connectivity report includes providing

the second access router with information about the first access router through the connectivity report.

Claim 18, upon which claims 19-25 and 34 depend, is directed to a mobile internet protocol network including a first access router, a second access router coupled to the first access router, and a mobile node. The second access router is configured to send, upon the mobile node moving to a geographic location associated with the second access router, a request message to the mobile node requesting a connectivity report. The mobile node is configured to provide the second access router with information about the first access router through the connectivity report.

Claim 26, upon which claims 27-31 and 35 depend, is directed to an access router including a processor configured to execute computer-readable instructions for performing handing over a mobile node from another access router. The instructions are also for performing sending a request message to the mobile node. The instructions are further for receiving a connectivity report from the mobile node. The receiving the connectivity report includes receiving information about the another access router.

It is respectfully submitted that the combination of Abrol, Wu, and Subbiah fails to disclose or suggest all of the elements of any of the presently pending claims.

Abrol relates to a handoff technique for wireless communications. In Abrol, the mobile radio detects and decodes signals in the form of “overhead messages” from the router to which it is connected, as well as to those from other routers. Abrol, ¶¶ 34-35. The “overhead messages” each contain a “packet zone ID,” which differs from one router

to another. Abrol, ¶ 34. When the mobile radio detects a new packet zone ID, it transmits a signal that includes “PREV_PZID” (the packet zone ID of the router to which it was connected). Abrol, ¶ 35.

As noted above, the claims recite features that are not disclosed or suggested in the combination of Abrol, Wu, and Subbiah. For instance, claim 1 recites “sending a **request message** from a second access router to a mobile node.” Claim 1 also recites, “in response to the **request message**, sending a **connectivity report** from the mobile node to the second access router.” Claim 10 similarly recites, “sending a **request message** from the second access router to the mobile node,” and “sending a **connectivity report** from the mobile node to the second access router.” Likewise, claim 18 recites in part that “the second access router is configured to send a **request message** to the mobile node requesting a **connectivity report**.” Similarly, claim 26 recites, “An access router ... sending a **request message** to the mobile node” and “receiving a **connectivity report** from the mobile node.” Thus, each of the independent claims recites both a **request message** (from the access router to the mobile node) and a **connectivity report** (from the mobile node).

The Office Action agreed that Abrol does not teach the claimed request message and the claimed connectivity report. The Office Action, however, implicitly took the position that these features are supplied by Wu and Subbiah.

Wu relates to a wireless network handoff key. As generally described in Wu, a wireless terminal 12 may initiate a handoff from access point 14 to access point 16. The

wireless terminal 12 may exchange probe request and response messages with the access point 16. If the probe succeeds, the wireless terminal 12 may exchange handoff authentication messages with the access point 16. The handoff authentication message exchange is illustrated in Table 1 and explained in paragraph 0042. The exchange essentially consists of the wireless terminal 12 requests authentication from the access point 16. The access point 16 replies with challenge text. The wireless terminal 12 responds with challenge text encrypted by “handoff WEP key.” The access point 16 replies with the authentication result.

Wu, however, does not remedy the deficiencies of Abrol. The Office Action appears to have interpreted the probe request and response packets of Wu as the claimed “request message” and to have interpreted the handoff authentication message of Wu as the connectivity report.

Applicant respectfully submits that the Office Action has misread Wu. Wu never uses the term “connectivity report,” nor even the individual words “connectivity” or “report.” This is evidence that Wu does not describe the same thing as that which is claimed. Additionally, although Wu uses the term “request” with regard to certain packets, Applicant respectfully submits that these probe request packets do not correspond to the claimed request message.

One way to see the difference between Wu and the claimed invention is to look at the difference in the communication scheme. In Wu, the request messages are generated by the wireless terminal 12 and communicated to the access point 16, which responds

with reply messages. In contrast, claim 1, for example, states that the request message is sent from the second access router to the mobile node.

The communication scheme is also reversed in Wu compared to the claimed invention as applied to Wu's handoff authentication message contrasted with the claimed connectivity report. Wu's handoff authentication message is sent from the access point 16 to the wireless terminal 12 in response to receiving challenge text properly encrypted by "handoff WEP key." In contrast, claim 1, for example, states that the connectivity report is sent from the mobile node to the second access router.

Additionally, the claimed "connectivity report" as described in the present application can allow the second AR to know the information of the first AR where the MN just came from. In Wu there is no corresponding ability with respect to old access point 14. The probe request and authentication message can help the MN to discover and perform authentication with the new access point 16. The Office Action stated that Abrol discloses an old IP address of the first access router. However, neither Abrol nor Wu discloses the idea of providing "the second access router with information about the first access router through the connectivity report," as recited by claims 1, 10, 18, and 26.

The Office Action appears to have taken the position that this deficiency is remedied by Subbiah.

Subbiah generally relates to a method and apparatus for seamless mobility between different access technologies. Subbiah, at paragraph 0024, discusses Figure 3, which is a state diagram of logic segments of one or more programs running on an access

router to support handoff from one access router to another access router of a session between a mobile terminal and a host. As with Abrol and Wu, Subbiah is silent as to either a request message to the mobile node or a connectivity report from the mobile node.

Subbiah describes that the mobile phone sends a binding update message to a second access router including the address of the first access router. Subbiah states that the binding update message could be generated or forwarded by the first access router (to the second router) after receiving a stop code from the mobile phone if the first access router knows the address of the second access router.

Thus, Subbiah, like Abrol and Wu does not disclose or suggest either the connectivity report or the request message as claimed.

Accordingly, Applicant respectfully submits that the combination of Abrol, Wu, and Subbiah, whether the references thereof are taken singly or combined, does not teach or suggest all of the elements of any of the presently pending claims.

Claims 6-7, 14-15, 24-25, and 30-31 were rejected under 35 U.S.C. 103(a) as being unpatentable over Abrol in view of Wu and Subbiah, and further in view of U.S. Patent Application Publication No. 2003/0210674 of Honkasalo et al. ("Honkasalo"). Applicant respectfully traverses this rejection, because Honkasalo is not proper art in this rejection.

Honkasalo was published on November 13, 2003, based on parent applications filed as early as May 5, 1997. The present application was filed on September 25, 2003.

Accordingly, Honkasalo is only available as a reference, if at all, under 35 U.S.C. 102(e). Moreover, both Honkasalo and the present application were subject to obligation of assignment to the same entity, Nokia Corporation, at the time of the invention. Accordingly, it is respectfully submitted that 35 U.S.C. 103(c) bars the use of Honkasalo to show obviousness under 35 U.S.C. 103(a).

Because the rejection requires Honkasalo, and because Honkasalo is not a proper reference in this situation, it is respectfully submitted that this rejection is moot, and it is respectfully requested that this rejection be withdrawn.

Claims 9, 17, 22, and 28 were rejected under 35 U.S.C. 103(a) as being unpatentable over Abrol in view of Wu and Subbiah and further in view of U.S. Patent Application Publication No. 2004/0092264 of Koodli et al. ("Koodli"). Applicant respectfully traverses this rejection because Koodli is not proper prior art in this rejection.


Koodli was published on May 13, 2004, on an application filed November 12, 2002. The present application was filed on September 25, 2003. Accordingly, Koodli is only available as a reference, if at all, under 35 U.S.C. 102(e). Moreover, both Koodli and the present application were subject to obligation of assignment to the same entity, Nokia Corporation, at the time of the invention. Accordingly, it is respectfully submitted that 35 U.S.C. 103(c) bars the use of Koodli to show obviousness under 35 U.S.C. 103(a).

Because the rejection requires Koodli, and because Koodli is not a proper reference in this situation, it is respectfully submitted that this rejection is moot, and it is respectfully requested that this rejection be withdrawn.

For the reasons explained above, it is respectfully submitted that each of claims 1-35 recites subject matter that is neither disclosed nor suggested in the prior art. Accordingly, it is respectfully requested that all of claims 1-35 be allowed, and that this application be passed to issue.

In the event this paper is not being timely filed, the applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,


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